WHAT IS CLAIMED IS:

1. A method of isolating a recombinant adeno-associated virus, comprising applying a sample containing recombinant adeno-associated virus to an iodixanol gradient, and collecting said recombinant adeno-associated virus from said gradient.

2. The method of claim 1, wherein said iodixanol gradient is a discontinuous gradient.

3. The method of claim 2, wherein said iodixanol gradient comprises an about 15% iodixanol step, an about 25% iodixanol step, an about 40% iodixanol step, and an about 60% iodixanol step.

4. The method of claim 3, wherein said recombinant adeno-associated virus is collected from said 40% iodixanol step.

5. The method of claim 3, wherein said 15% iodixanol step further comprises about 1 M NaCl.

6. The method of claim 1, wherein said iodixanol gradient is subjected to centrifugation after applying said sample.

7. The method of claim 1, further comprising contacting said recombinant adeno-associated virus with a matrix comprising heparin, under conditions

effective to permit binding of said virus to said matrix, removing non-bound species from said matrix, and eluting said virus from said matrix.

8. The method of claim 7, wherein said matrix comprises heparin agarose type I or heparin agarose type II-S.

9. The method of claim 7, wherein said matrix is comprised within an HPLC column.

10. The method of claim 7, wherein said virus is eluted from said matrix with a solution comprising about 1 M NaCl.

11. The method of claim 1, further comprising contacting said recombinant adeno-associated virus with a hydrophobic matrix, under conditions effective to permit interaction of hydrophobic species with said hydrophobic matrix, and collecting the non-interacting virus from said hydrophobic matrix.

12. The method of claim 11, wherein said hydrophobic matrix comprises phenyl groups.

13. The method of claim 12, wherein said hydrophobic matrix is phenyl-sepharose.

14. The method of claim 1, further comprising applying said recombinant adeno-associated virus to a cesium chloride equilibrium density gradient, and collecting said recombinant adeno-associated virus from said gradient.

15. The method of claim 1, further comprising contacting said recombinant adeno-associated virus with at least a first ion exchange chromatography medium, under conditions effective to permit interaction of said virus with said medium, removing non-interacting species from said medium, and eluting said virus from said medium.

16. The method of claim 1, wherein said sample further comprises a virus.

17. The method of claim 16, wherein said sample further comprises an adenovirus.

18. The method of claim 1, wherein said sample further comprises at least a first polypeptide or protein.

19. The method of claim 1, wherein said sample further comprises a cell extract or a growth medium.

20. A method of isolating a recombinant adeno-associated virus, comprising the steps of:

a) centrifuging a sample containing recombinant adeno-associated virus through an iodixanol gradient;

b) collecting from said iodixanol gradient at least a first fraction comprising said recombinant adeno-associated virus;

c) contacting said at least a first fraction comprising said recombinant adeno-associated virus with a matrix comprising heparin, under conditions effective to permit binding of said virus to said matrix;

d) removing non-bound species from said matrix; and

e) eluting said virus from said matrix.

21. A method of isolating a recombinant adeno-associated virus, comprising the steps of:

a) centrifuging a sample containing recombinant adeno-associated virus through an iodixanol gradient;

b) collecting from said iodixanol gradient at least a first fraction comprising said recombinant adeno-associated virus;

c) contacting said at least a first fraction comprising said recombinant adeno-associated virus with a matrix comprising heparin, under conditions effective to permit binding of said virus to said matrix;

d) removing non-bound species from said matrix;

e) eluting said virus from said matrix;

f) contacting the eluted virus with a hydrophobic matrix, under conditions effective to permit interaction of hydrophobic species with said hydrophobic matrix; and

g) collecting the non-interacting virus from said hydrophobic matrix.

22. A method for reducing or eliminating adenovirus from a recombinant adeno-associated virus composition contaminated with adenovirus, comprising applying a sample containing recombinant adeno-associated virus and adenovirus to an iodixanol gradient, and collecting from said gradient at least a first fraction comprising said recombinant adeno-associated virus.

23. A method of producing a recombinant adeno-associated virus having a particle-to-infectivity ratio of less than about 100 to 1, comprising the steps of:

a) centrifuging a sample containing recombinant adeno-associated virus through an iodixanol gradient;

b) collecting from said iodixanol gradient at least a first fraction comprising said recombinant adeno-associated virus;

c) contacting said at least a first fraction comprising said recombinant adeno-associated virus with a matrix comprising heparin, under conditions effective to permit binding of said virus to said matrix;

d) removing non-bound species from said matrix; and

e) eluting said virus from said matrix.

24. Recombinant adeno-associated virus, prepared by applying a sample containing recombinant adeno-associated virus to an iodixanol gradient, and collecting said recombinant adeno-associated virus from said gradient.

25. A kit comprising, in a suitable container, iodixanol, a matrix comprising heparin and instructions for isolating recombinant adeno-associated virus.

26. The kit of claim 25, wherein said iodixanol is formulated as an iodixanol gradient.

27. The kit of claim 25, wherein said matrix comprises heparin agarose type I or heparin agarose type II-S.

28. The kit of claim 25, further comprising a hydrophobic matrix.

29. The kit of claim 28, wherein said hydrophobic matrix comprises phenyl groups.

30. The kit of claim 29, wherein said hydrophobic matrix is phenyl-sepharose.